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6734293

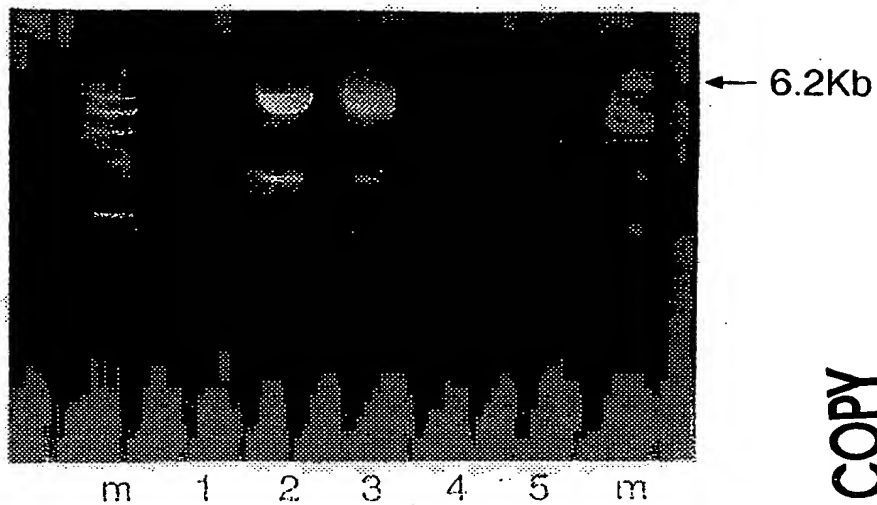


FIG. 1

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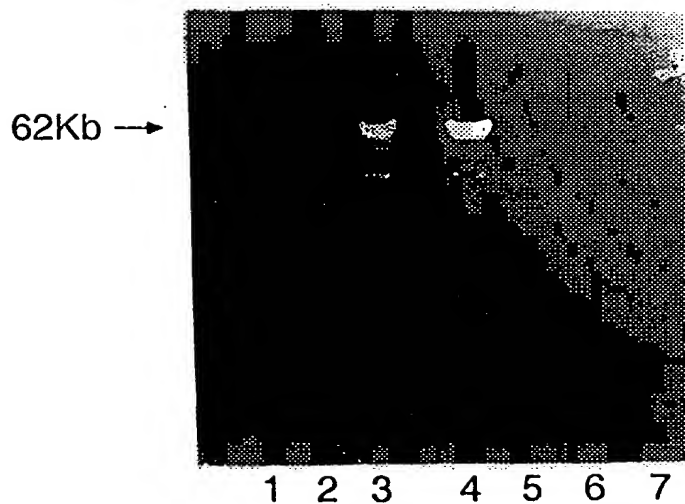


FIG. 2

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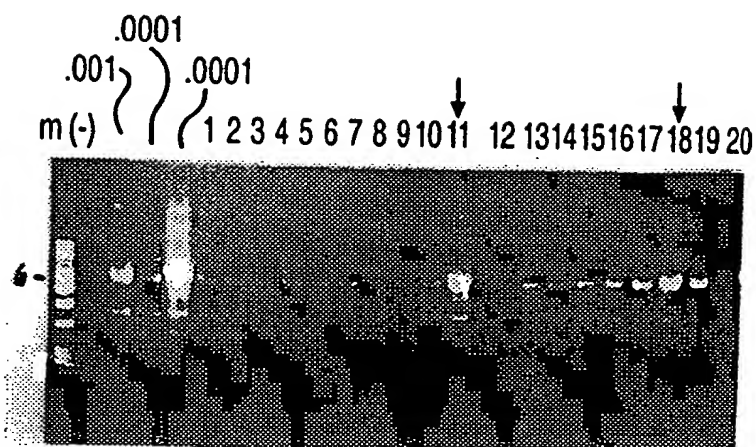


FIG. 3

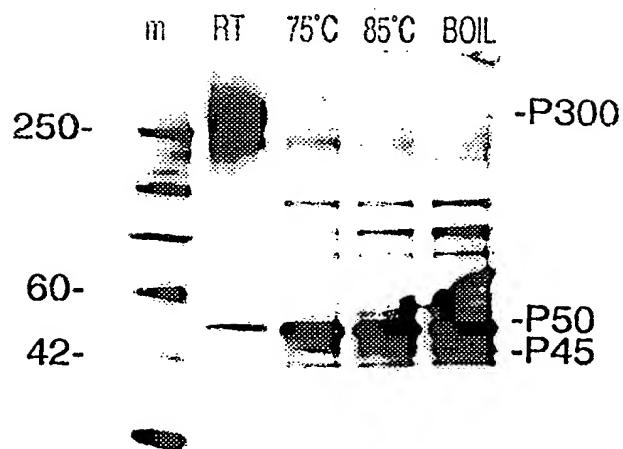
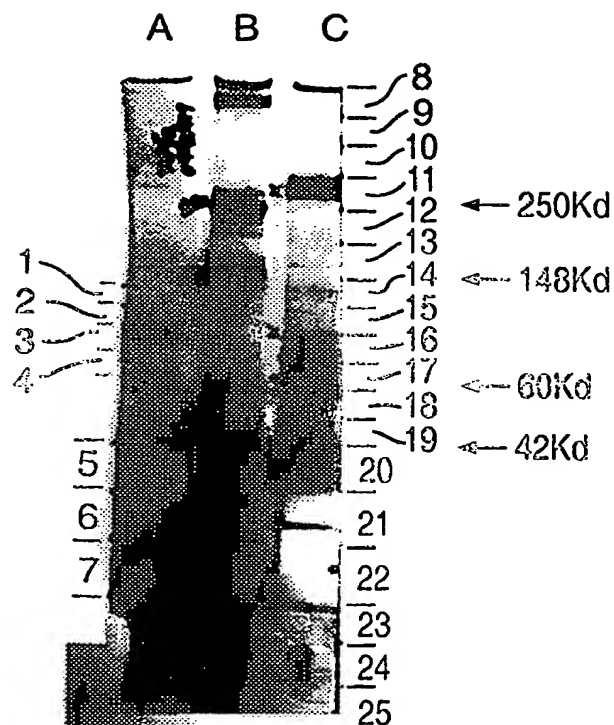
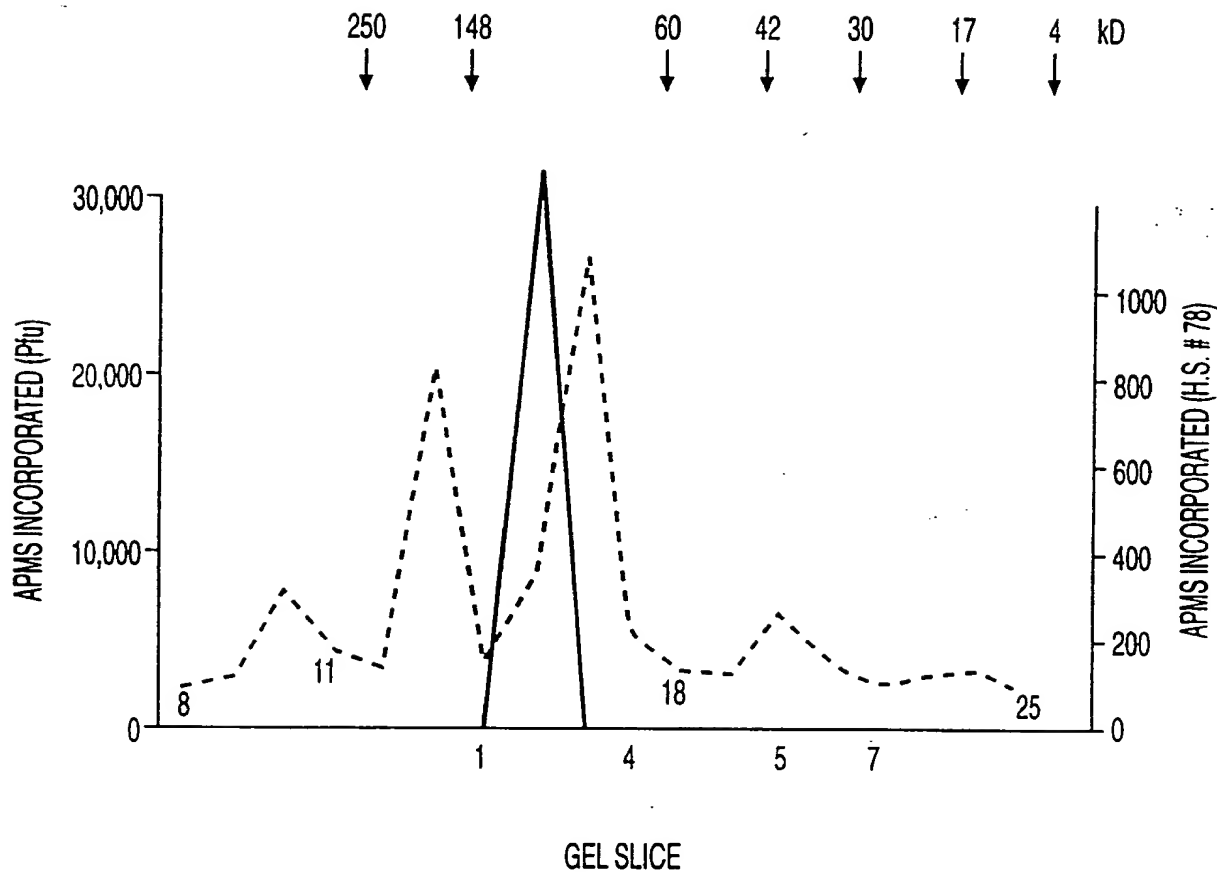


FIG. 7

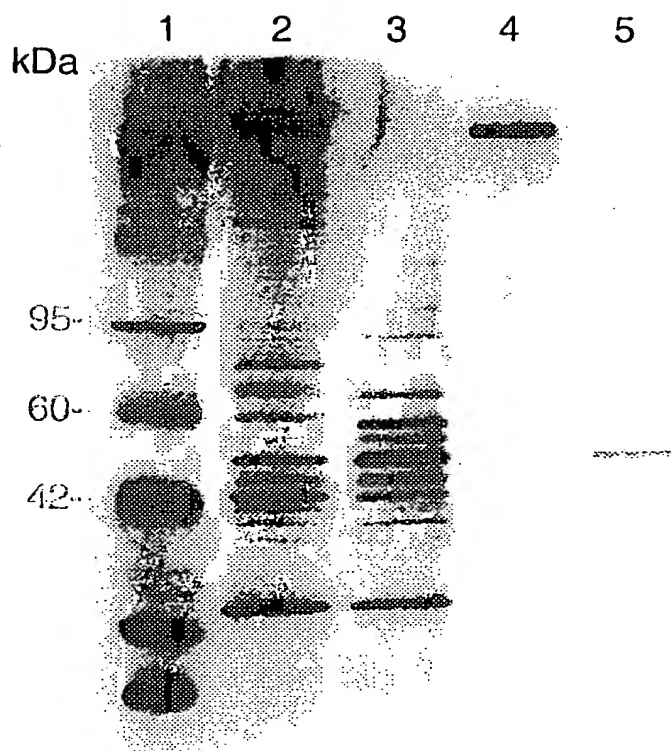
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**FIG. 4**

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**FIG. 5**

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**FIG. 6**

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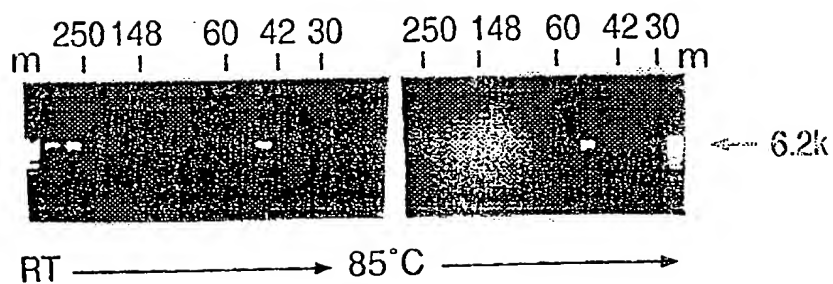


FIG. 8

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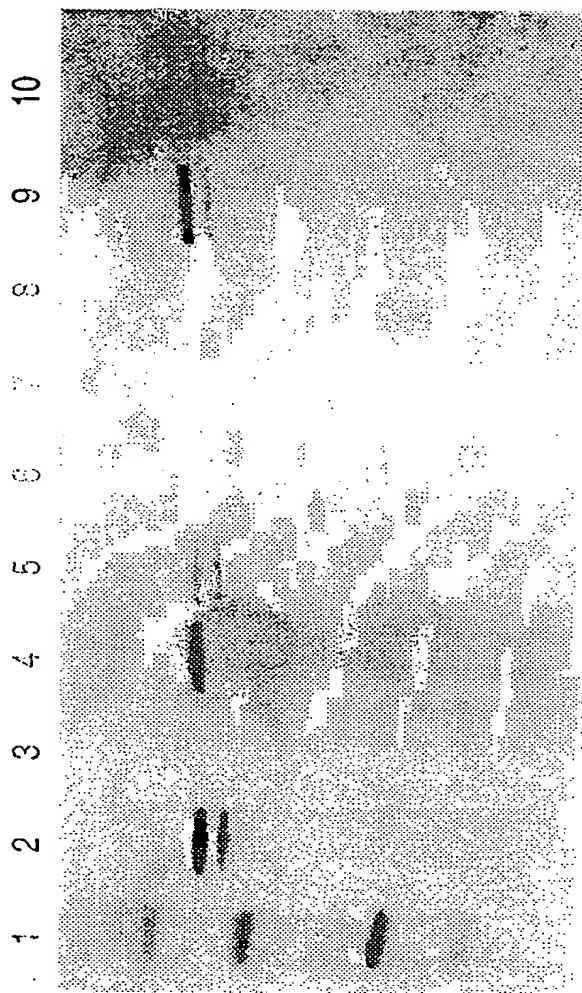


FIG. 9

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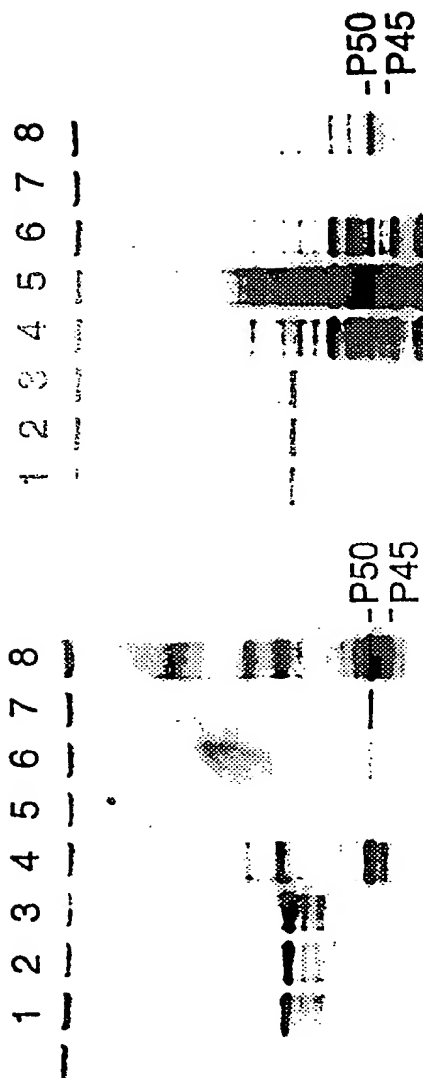


FIG. 10

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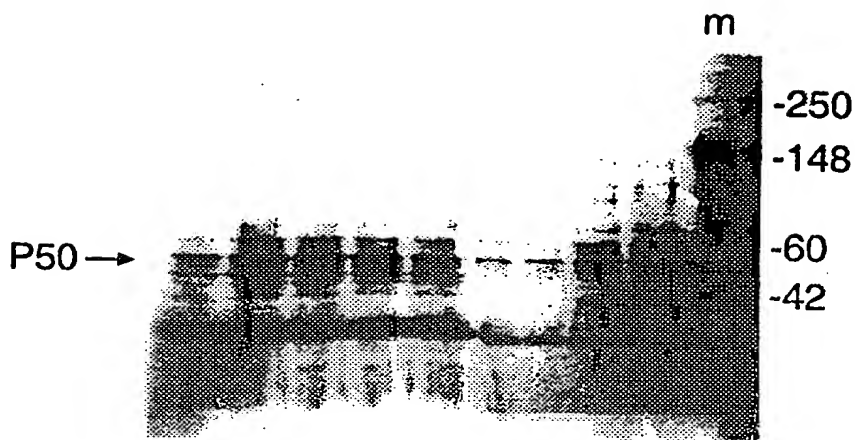


FIG. 11A

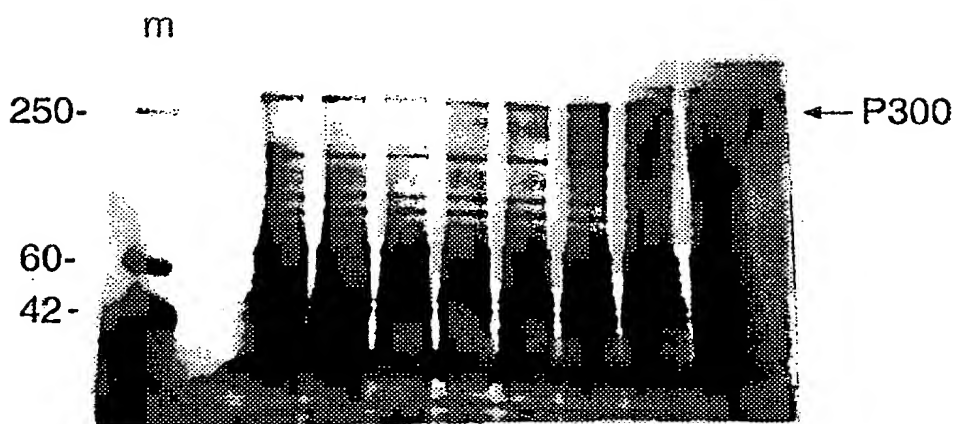


FIG. 11B

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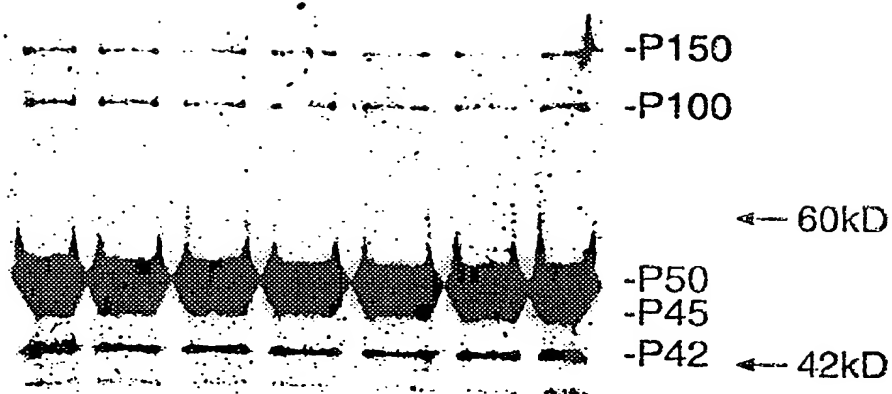
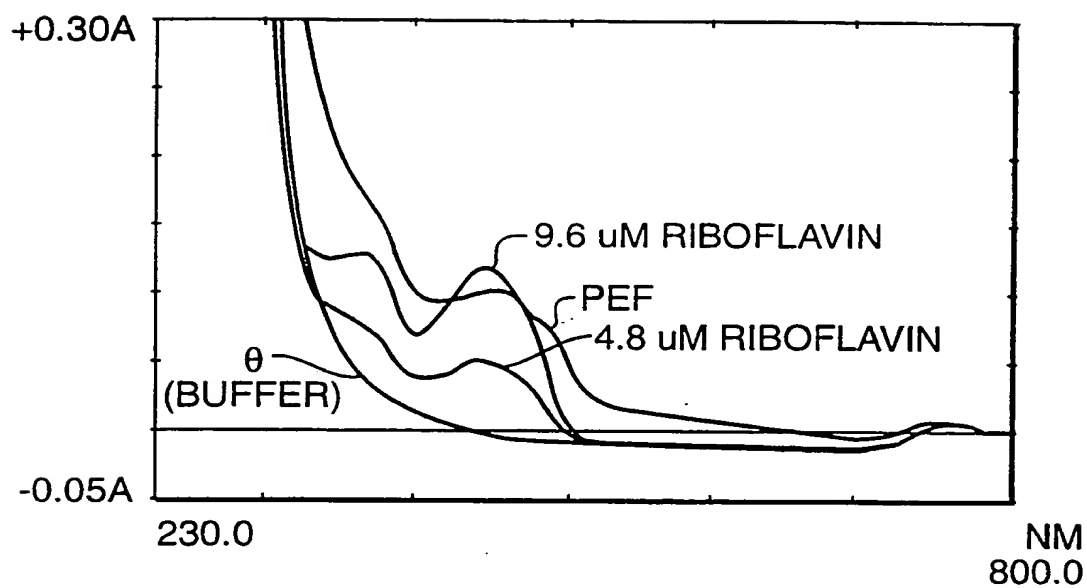


FIG. 12

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**FIG. 13**

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66000-00000000

CLONE 23

CLONE 1

PEF LOT 49

PEF LOT 52

| PEF LOT 52 | | | PEF LOT 49 | | | CLONE 1 | | | CLONE 23 | | | |
|------------|---|-----|------------|---|-----|---------|----------------|------|----------|----------------|------|------|
| NONE | 7 | 0.7 | 0.2 | 7 | 0.7 | 0.2 | 1 ul (1/10) | 1 ul | 5 ul | 1 ul (1/10) | 1 ul | 5 ul |

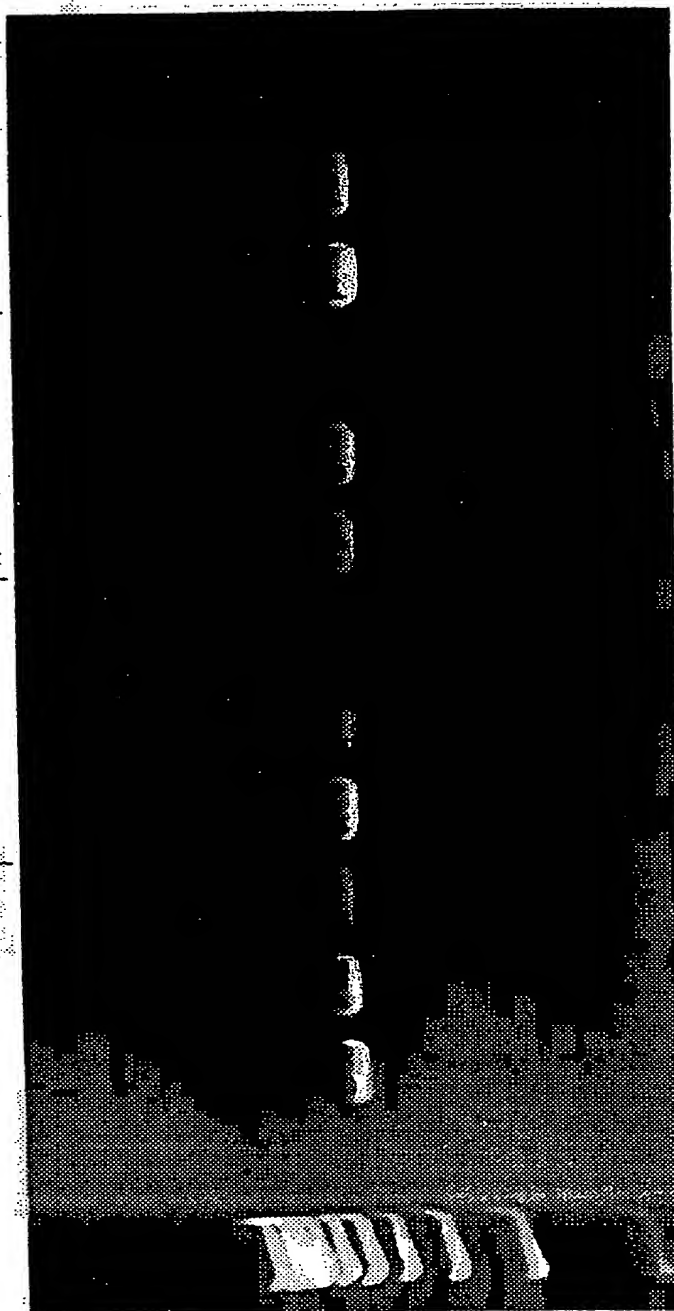
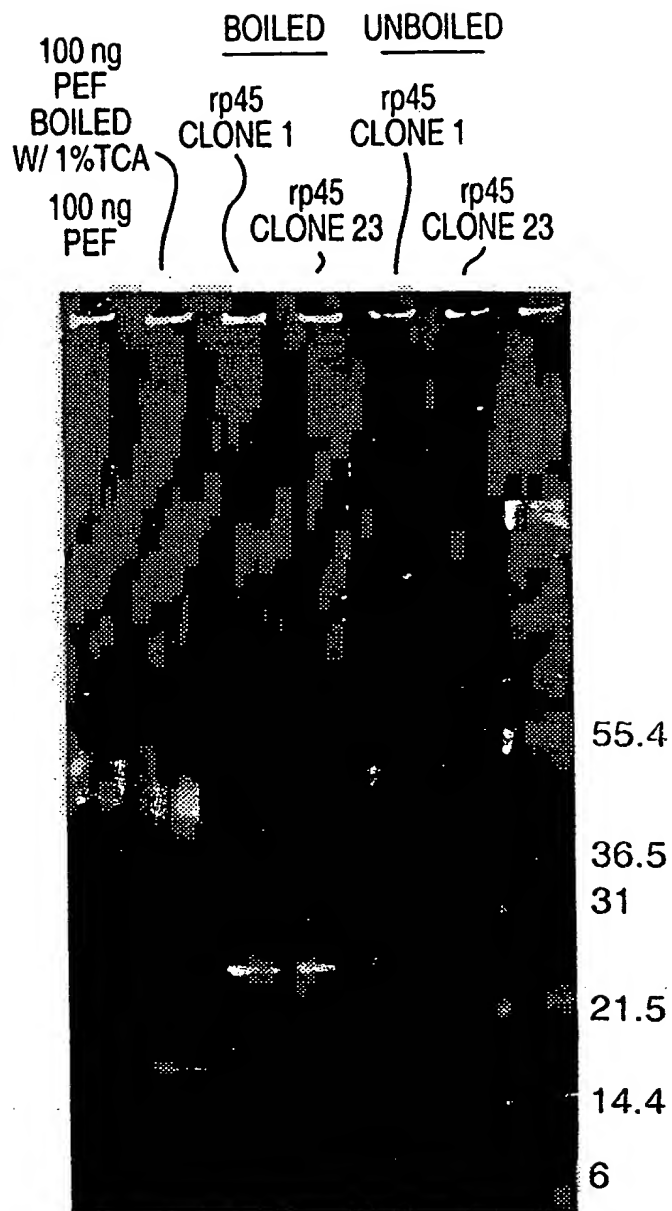
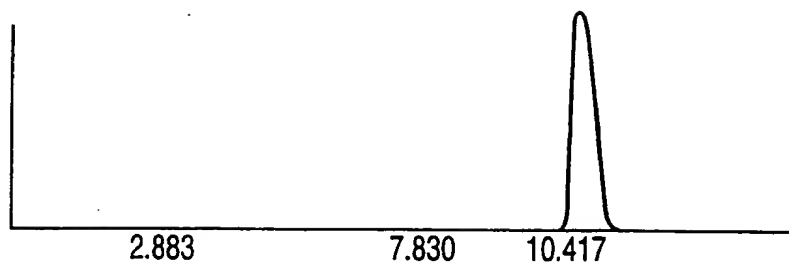
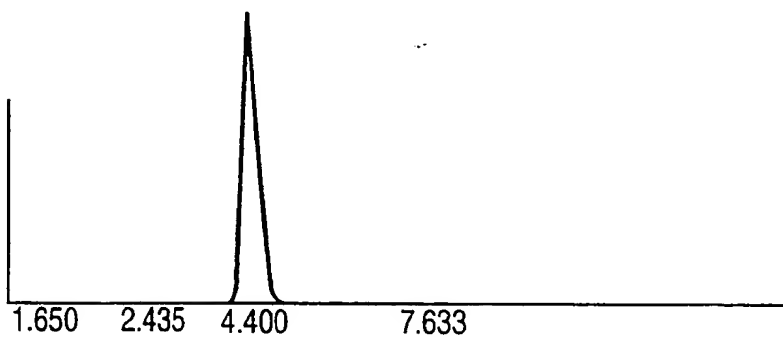
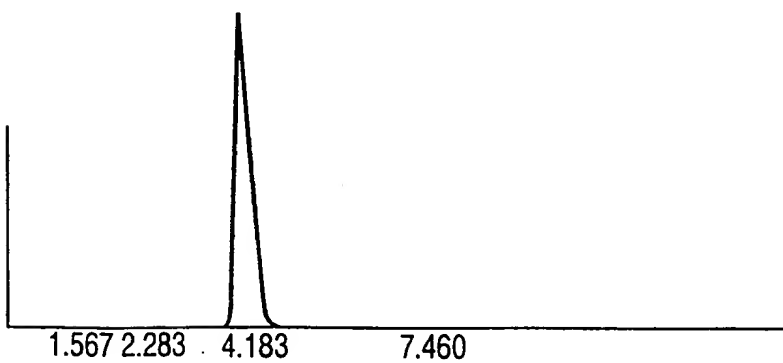


FIG. 14

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**FIG. 15**

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**FIG. 16A****FIG. 16B****FIG. 16C**

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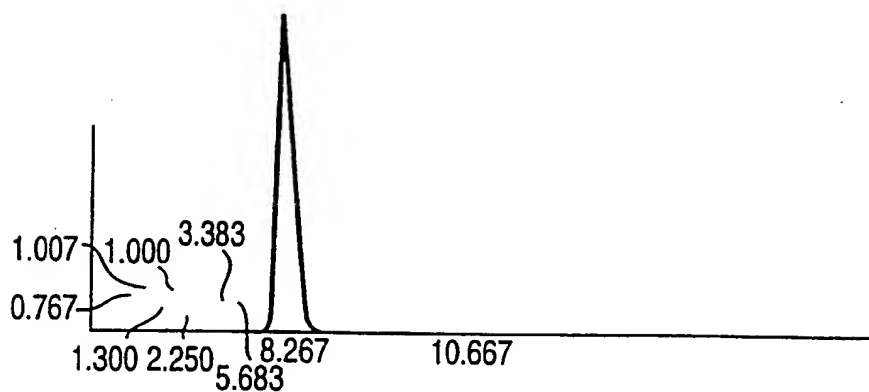


FIG. 16D

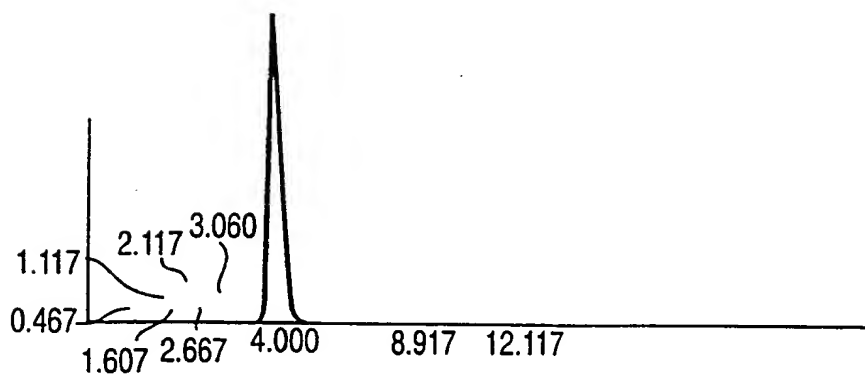


FIG. 16E

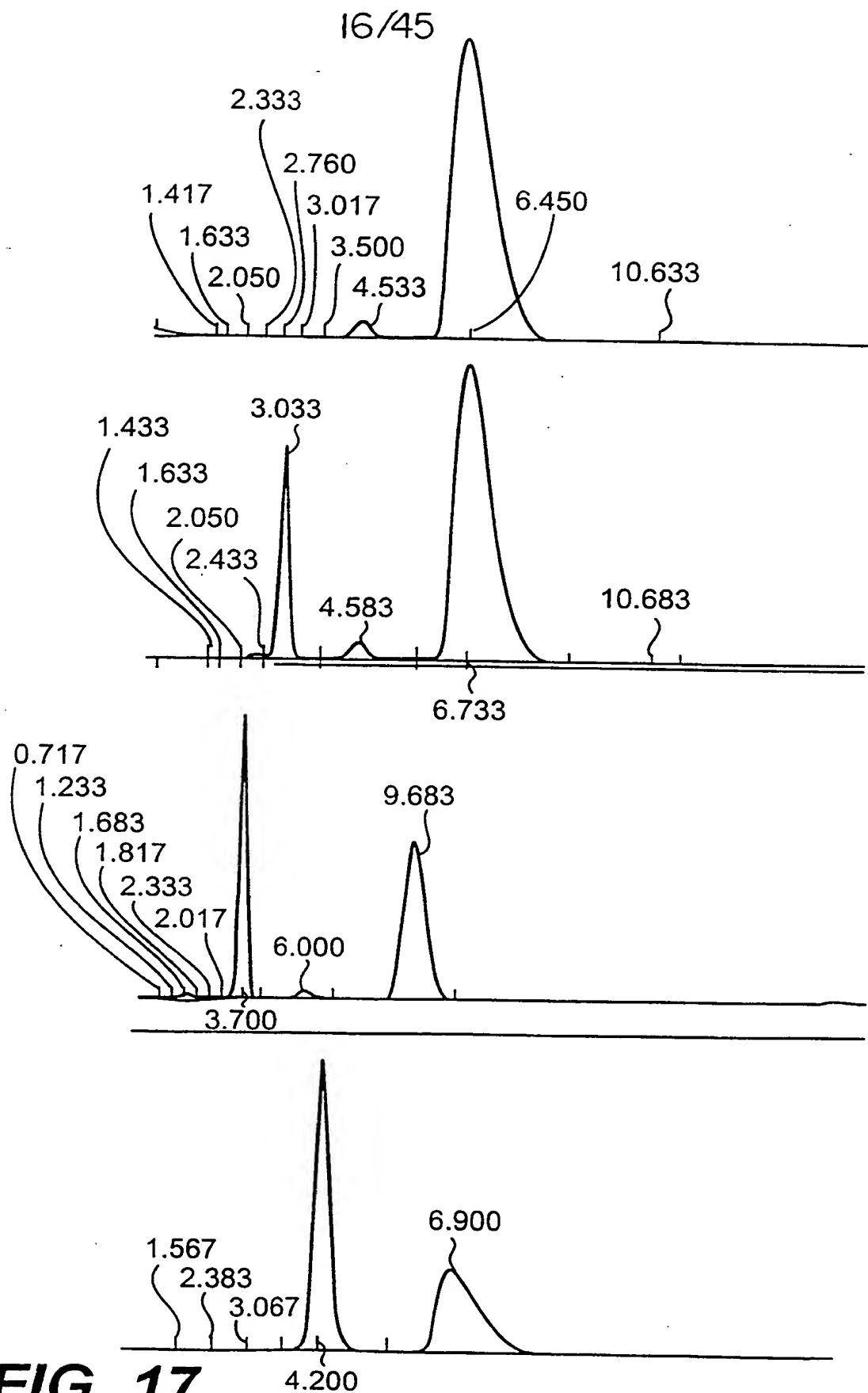
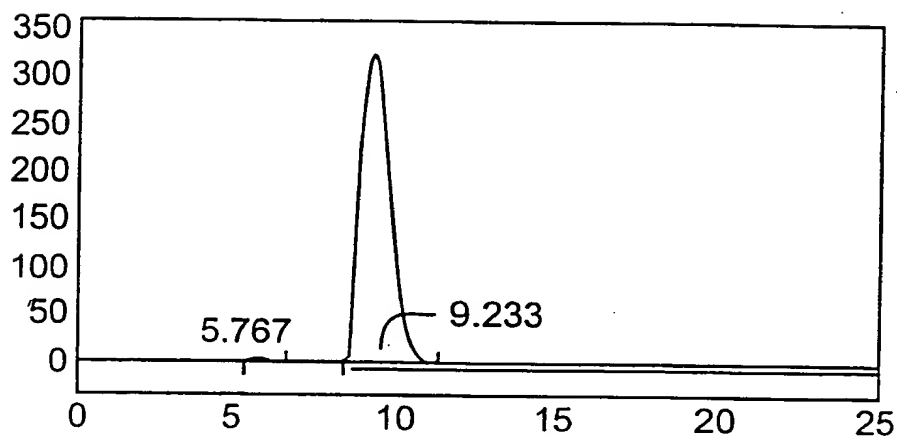
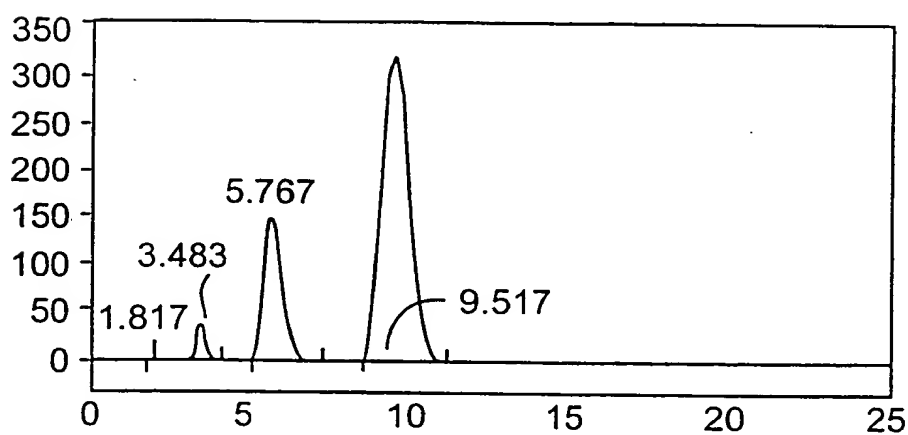
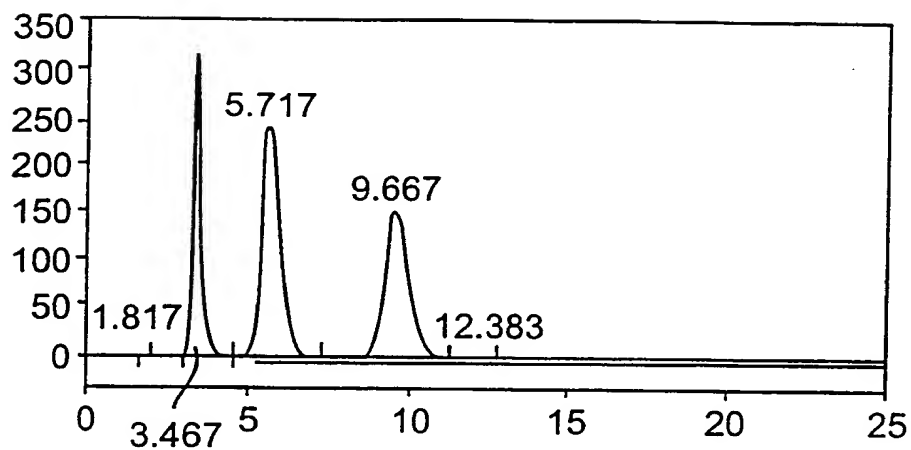
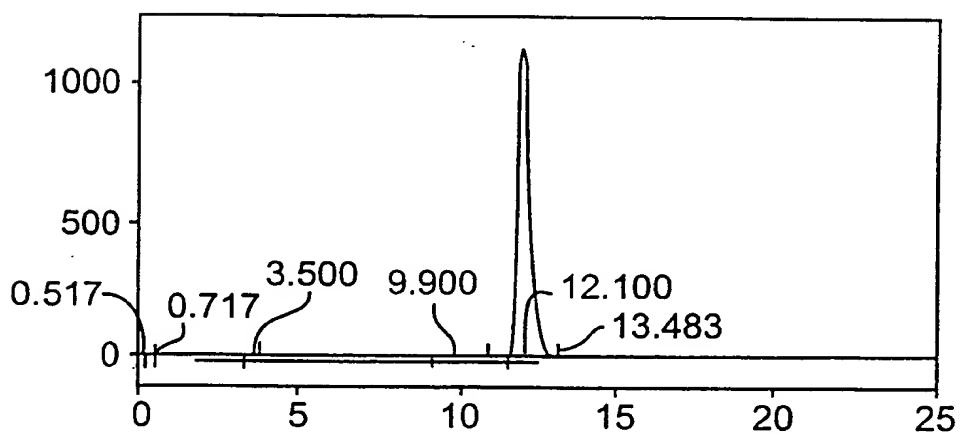


FIG. 17

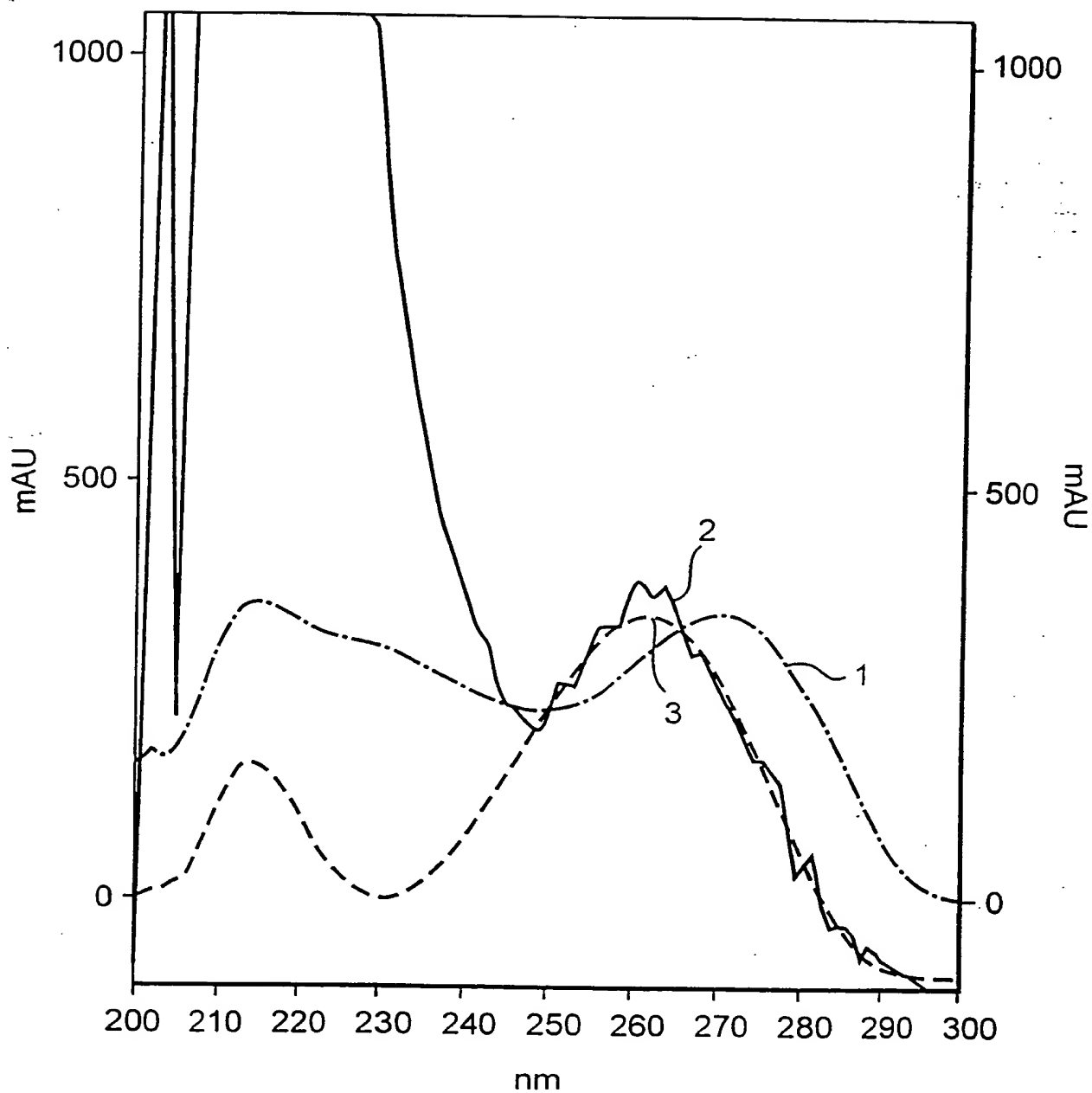
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**FIG. 18A****FIG. 18B**

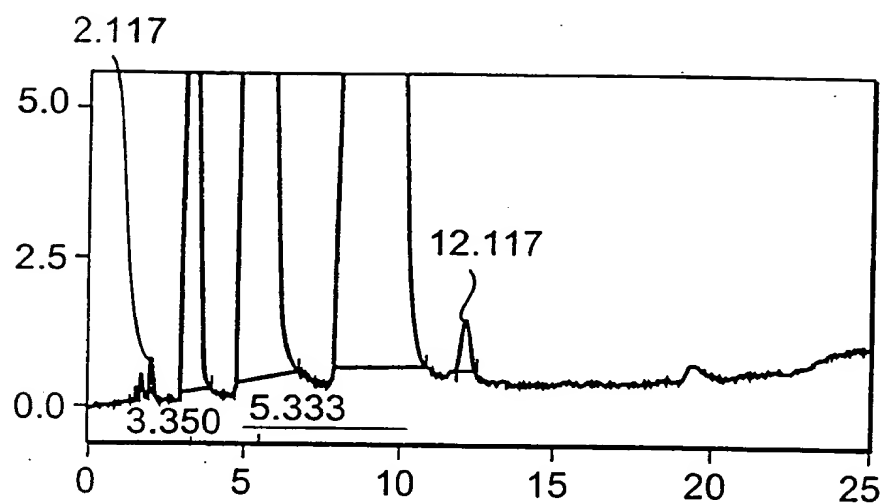
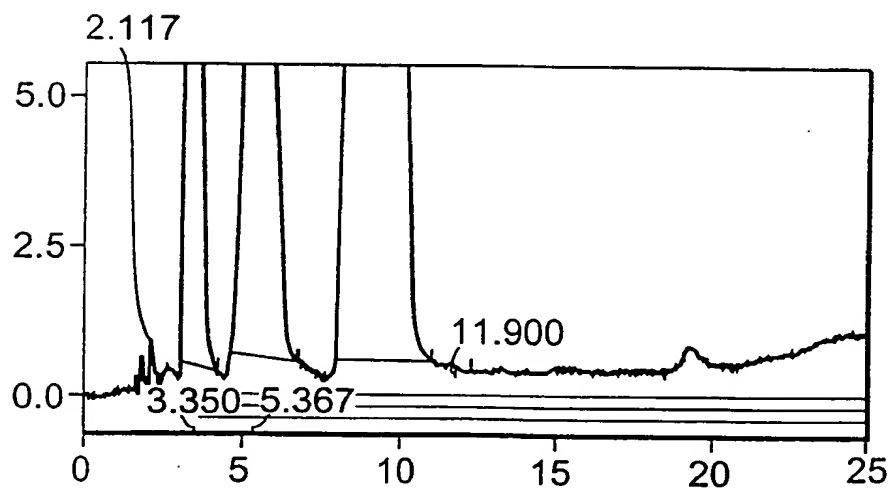
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**FIG. 18C****FIG. 18D**

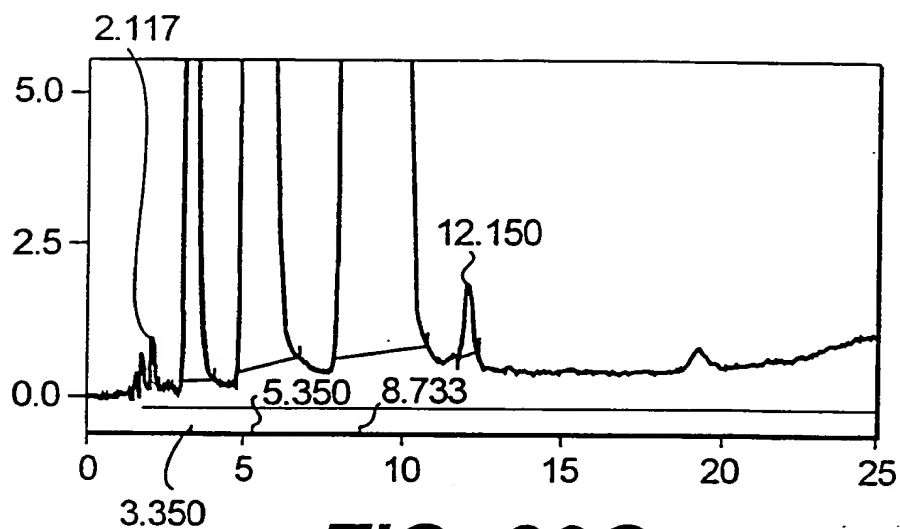
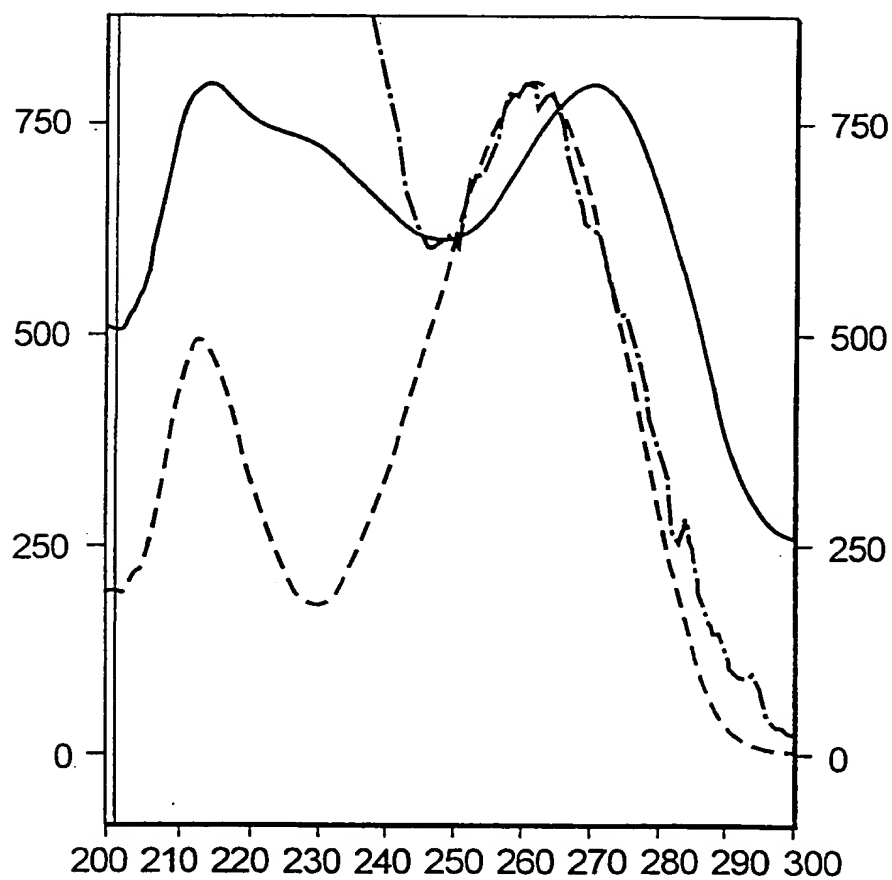
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**FIG. 19**

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**FIG. 20A****FIG. 20B**

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**FIG. 20C****FIG. 20D**

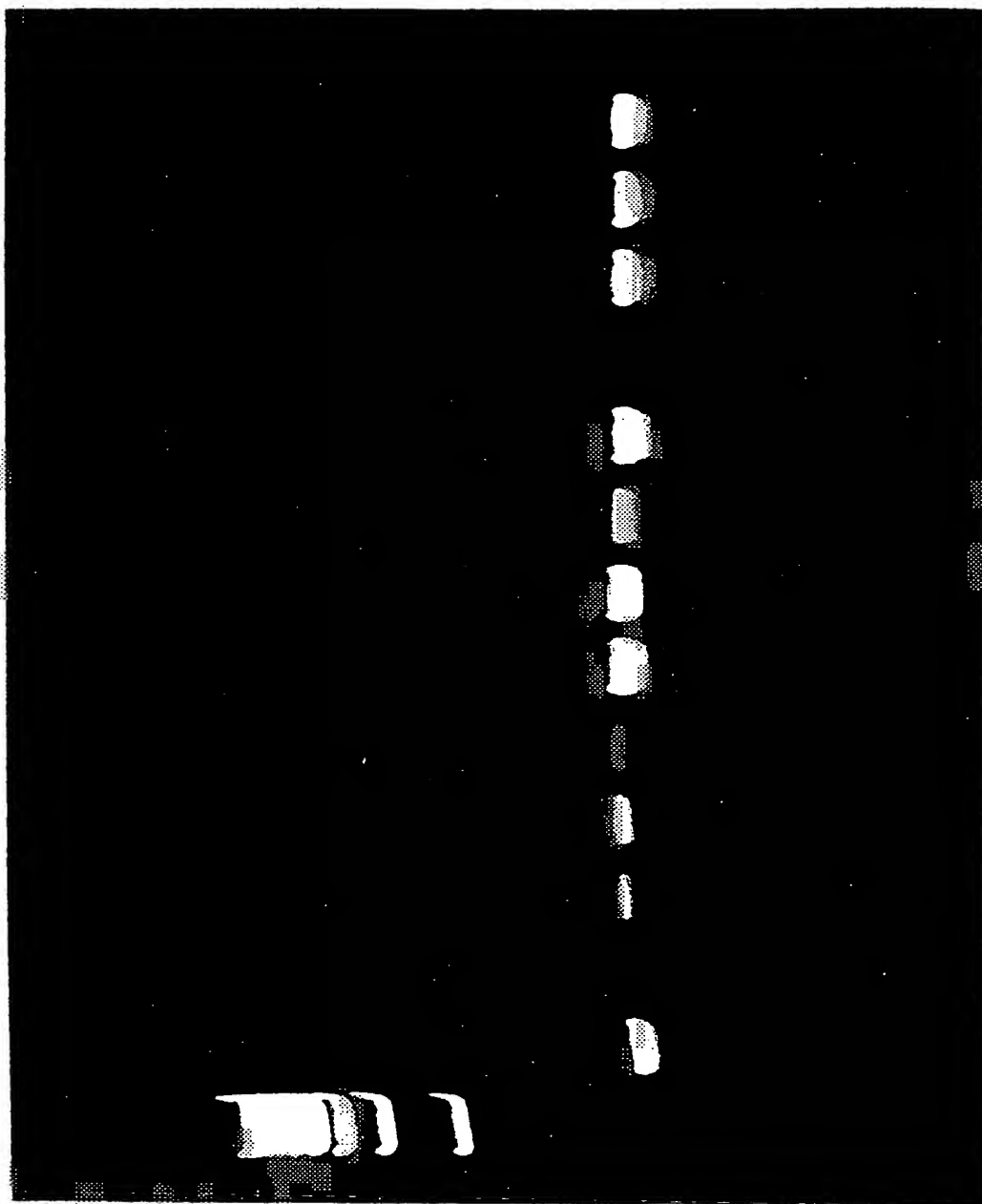


FIG. 21

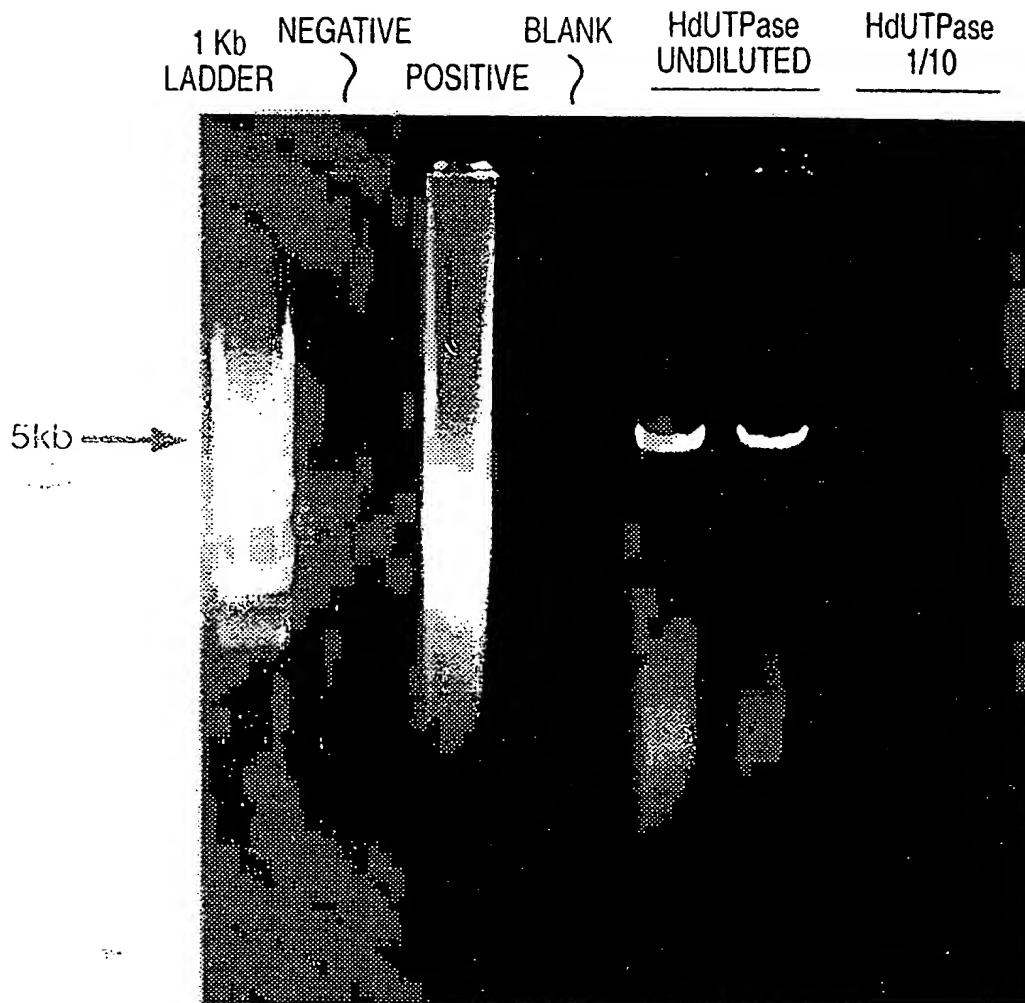
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| Pfu Pol | | | Pfu Pol + PEF | Taq Pol |
|------------|-----------------------------------|-----------------------------------|---------------------------------|---------------------------|
| NO OLIGO | Pmole CONTROL OLIGO | Pmole dU OLIGO | Pmole dU OLIGO | Pmole dU OLIGO |
| PEF - + | 0.016 16 8 1.6 0.8 0.16 M 0.08 | 0.016 M 16 8 1.6 0.8 0.16 0.08 | 0.016 16 8 1.6 0.8 0.16 0.08 | 0.16 16 8 1.6 0.8 0.08 |



FIG. 22

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**FIG. 23**

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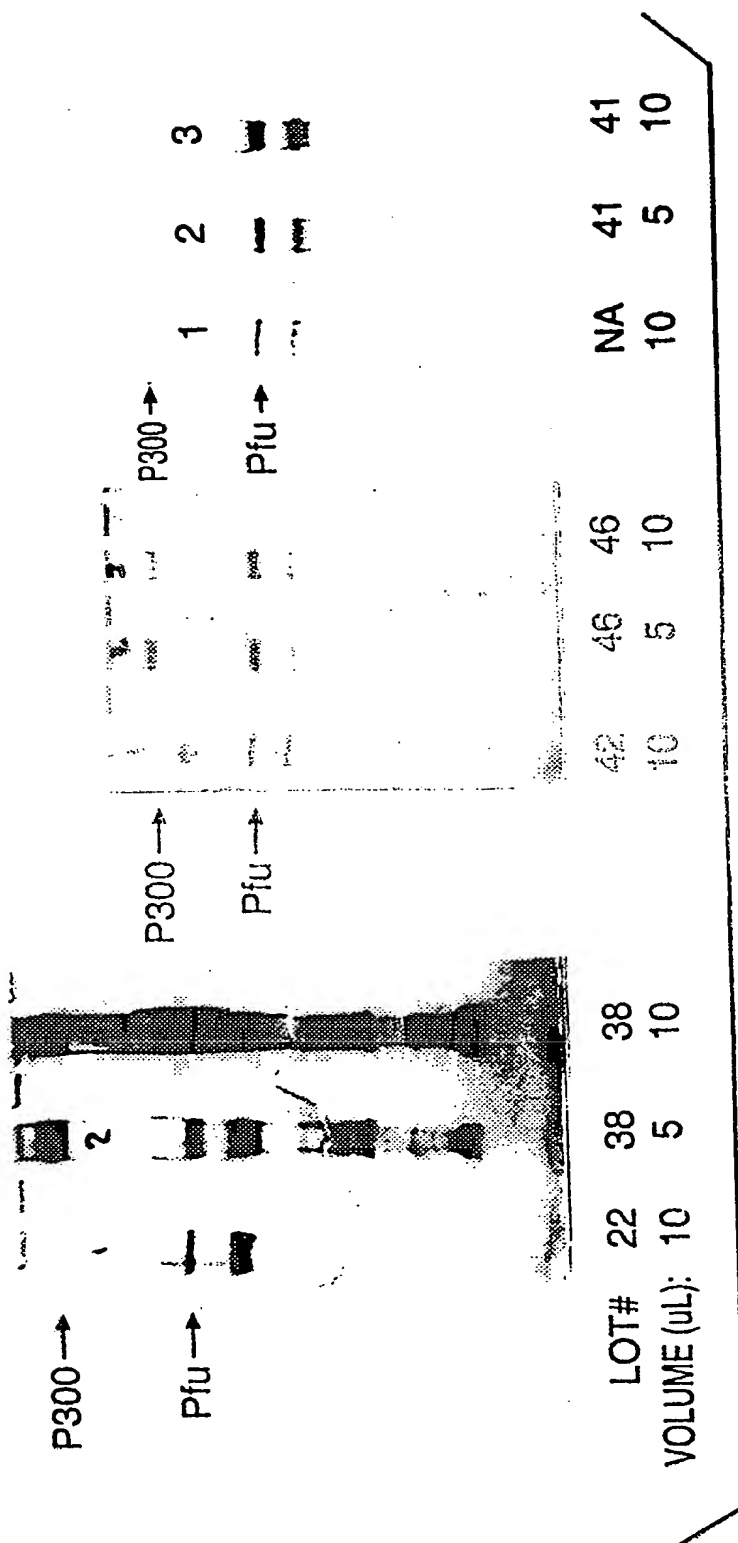


FIG. 24

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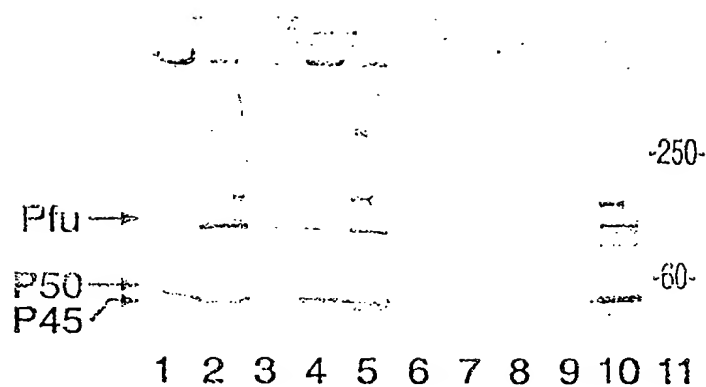
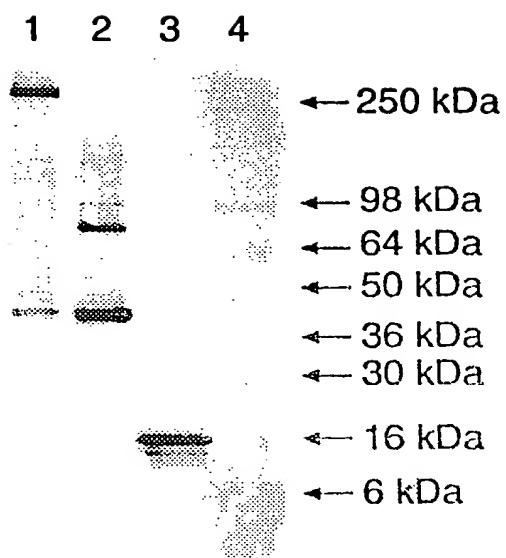


FIG. 25

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**FIG. 26**

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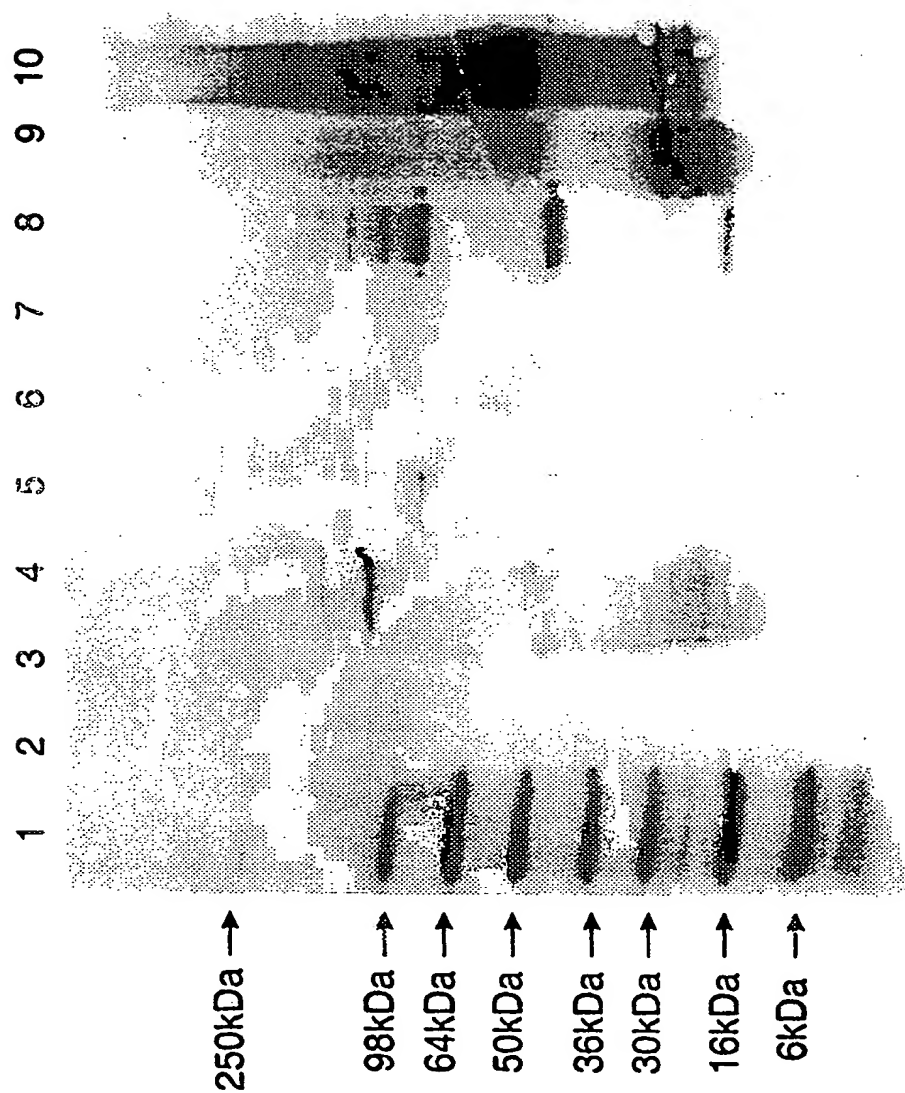


FIG. 27

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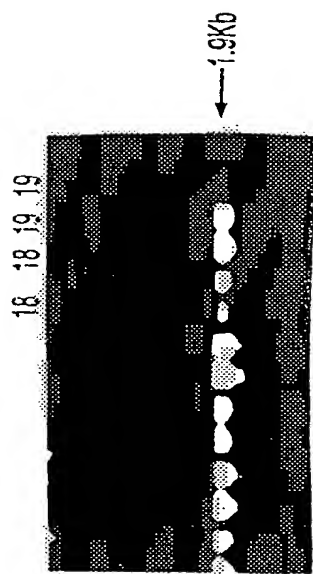
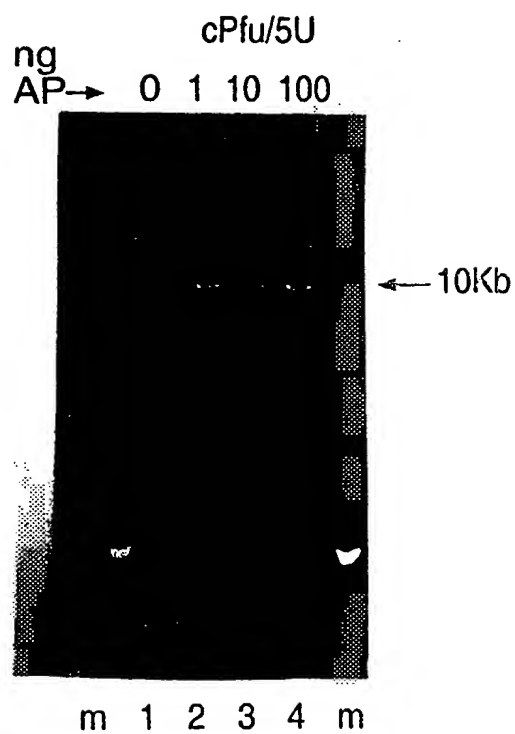


FIG. 28

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**FIG. 29**

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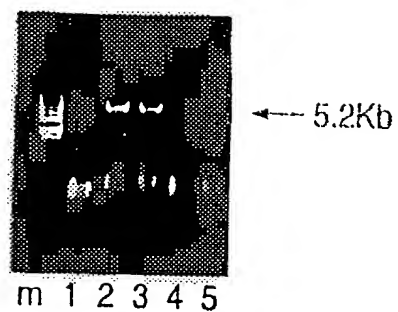


FIG. 30

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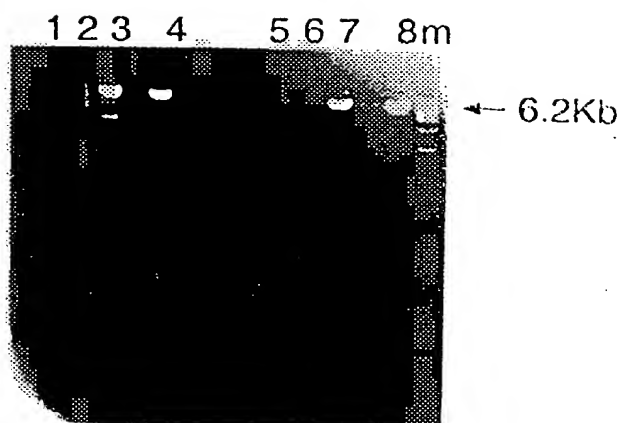


FIG. 31

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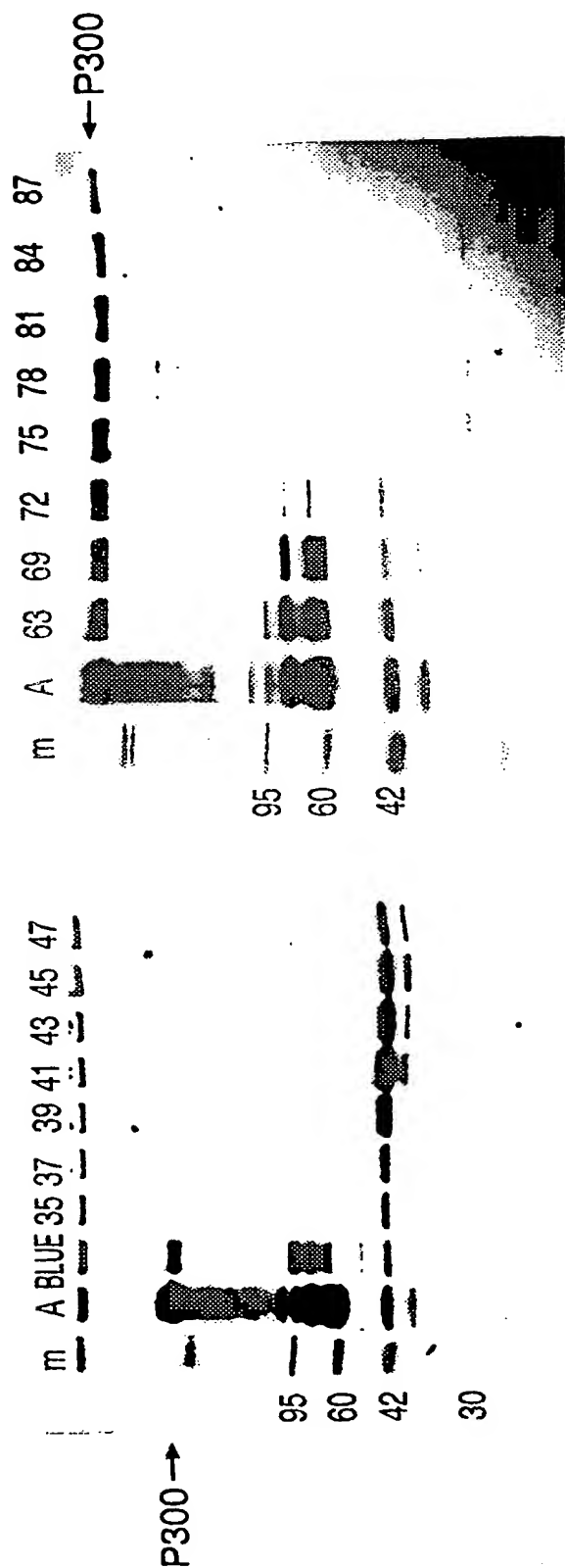


FIG. 32A

FIG. 32B

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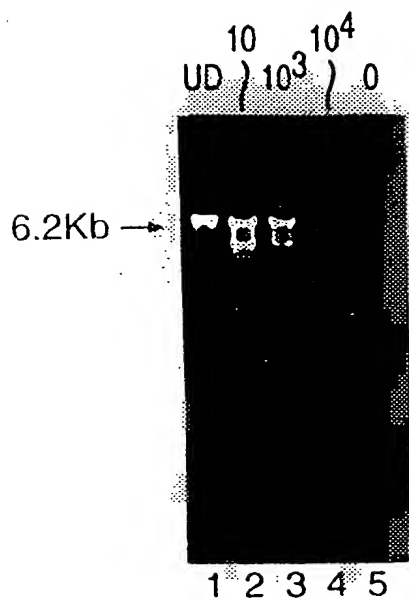


FIG. 33

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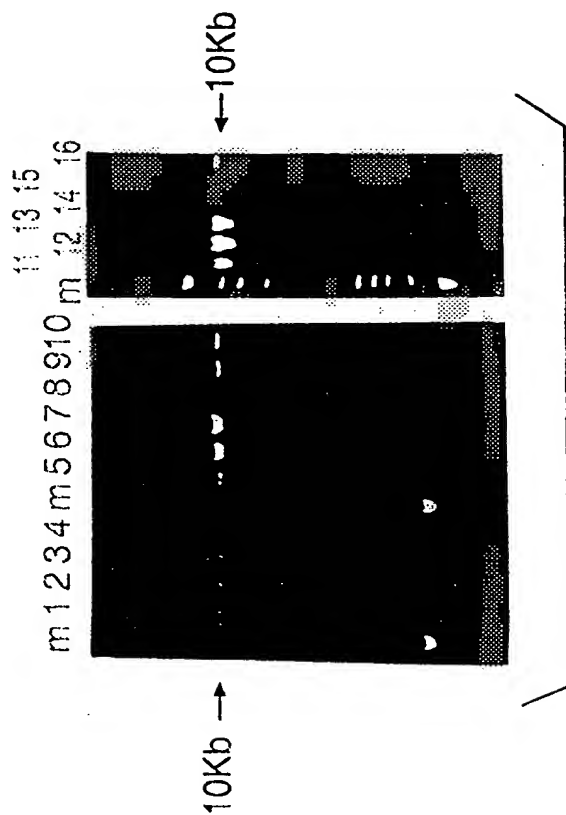
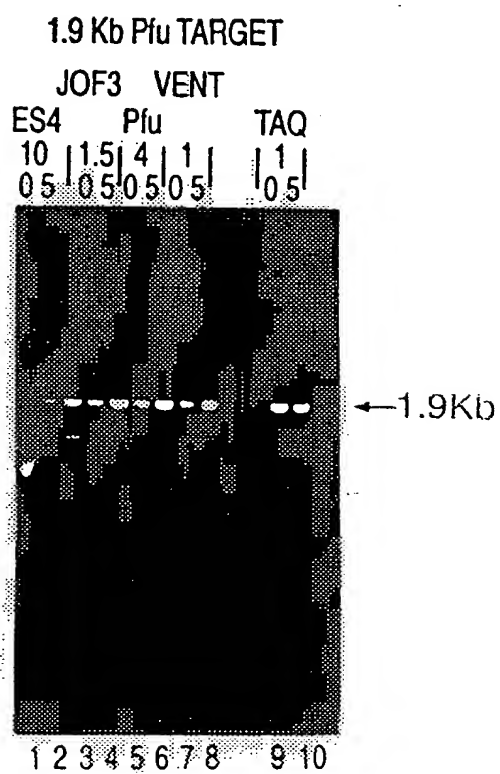


FIG. 34

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**FIG. 35**

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DEEP VENT USING 0.75u

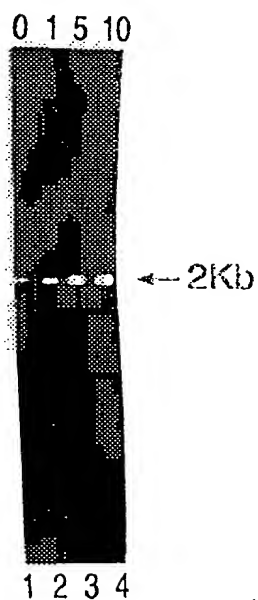


FIG. 36



FIG. 37

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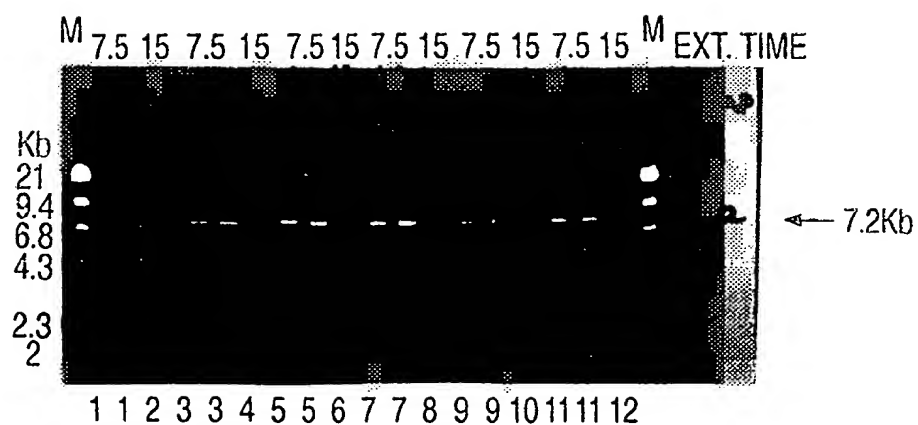


FIG. 38

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Pfu "PCR ENHANCER" IN QUICKCHANGE MUTAGENESIS

| LINEAR AMPLIFICATION CONDITIONS | | | | TRANSFORMATION RESULTS | |
|------------------------------------|---------------|---------------------|------------------------|---------------------------|-----------------|
| <u>POL.</u> | <u>BUFFER</u> | <u>H.S. #75</u> | <u>AMPL. PROD.</u> | <u>#cfu</u> | <u>%MUTANTS</u> |
| nPfu (#38) | nPfu | 0 | + | 84 | 95 |
| | | 1 μ l | \pm | 47 | 87 |
| | | .1 μ l | + | 154 | 97 |
| | | .01 μ l | ++ | 632 | 95 |
| | | .001 μ l | + | 484 | 94 |
| nPfu (#24A) | nPfu | 0 | + | 94 | 89 |
| | | 1 μ l | + | 34 | 85 |
| | | .1 μ l | + | 173 | 91 |
| | | .01 μ l | ++ | 468 | 96 |
| | | .001 μ l | + | 230 | 90 |

FIG. 39

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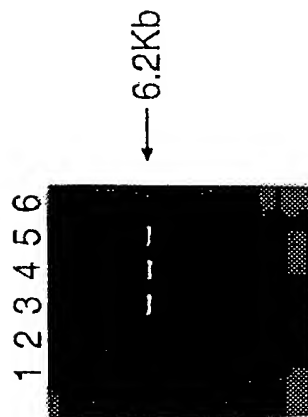
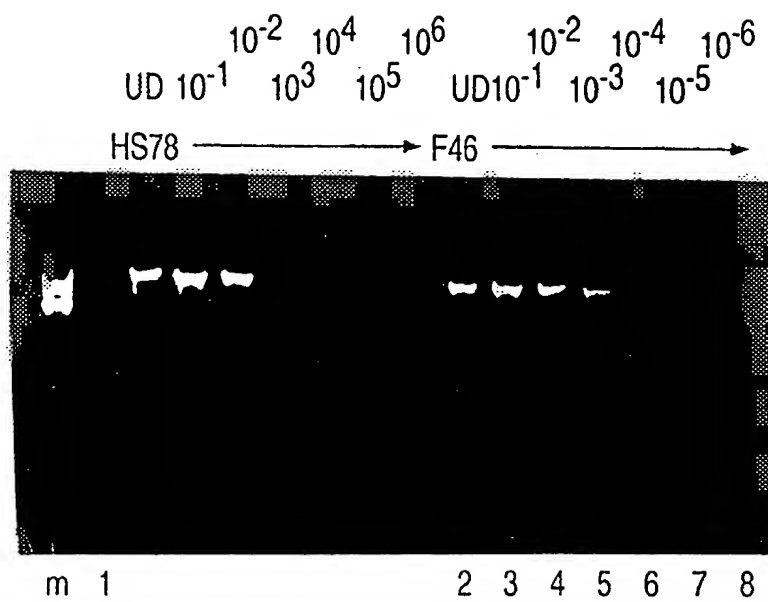


FIG. 40

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**FIG. 41**

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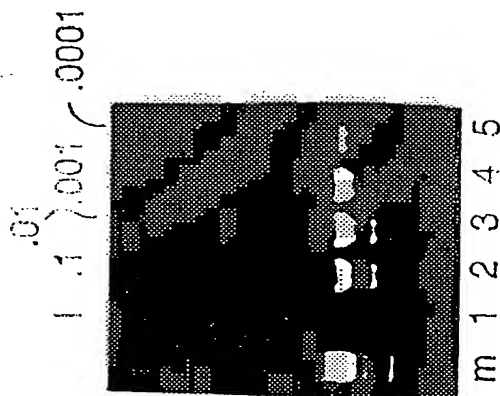


FIG. 42

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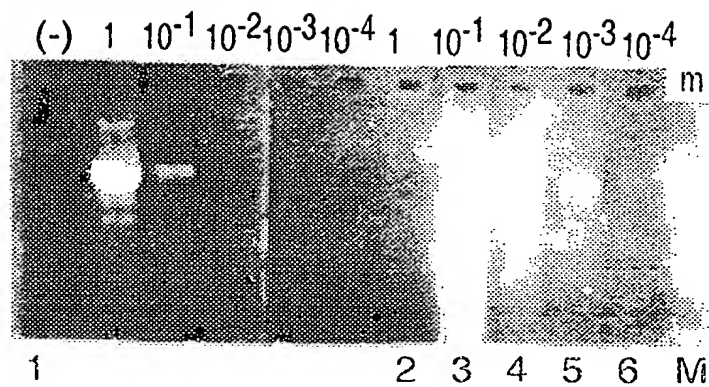


FIG. 43

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FIG. 44B



FIG. 44A

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